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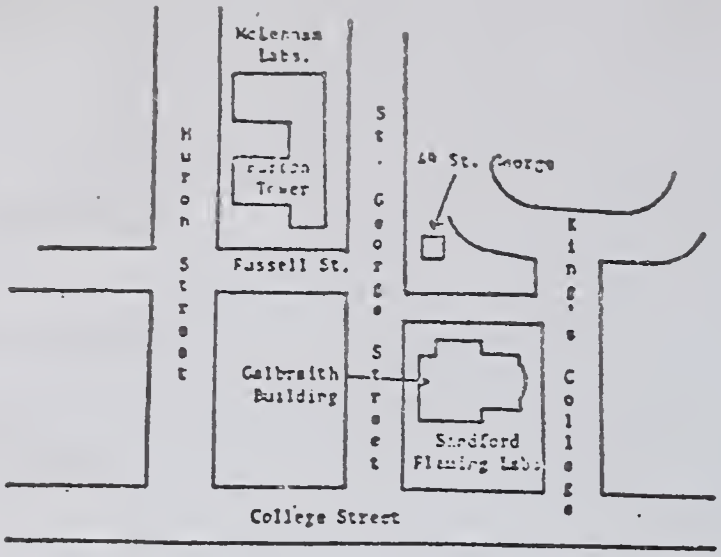
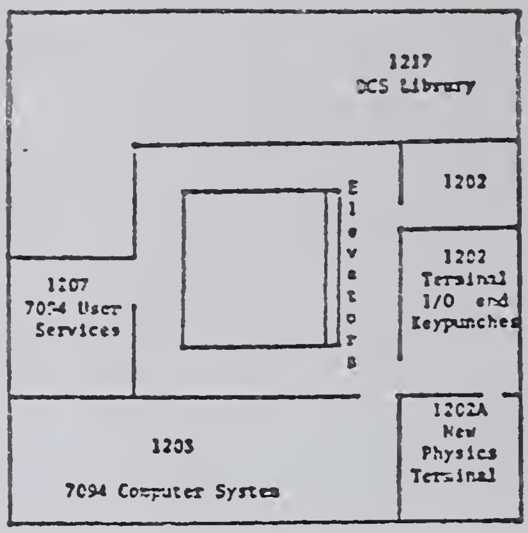
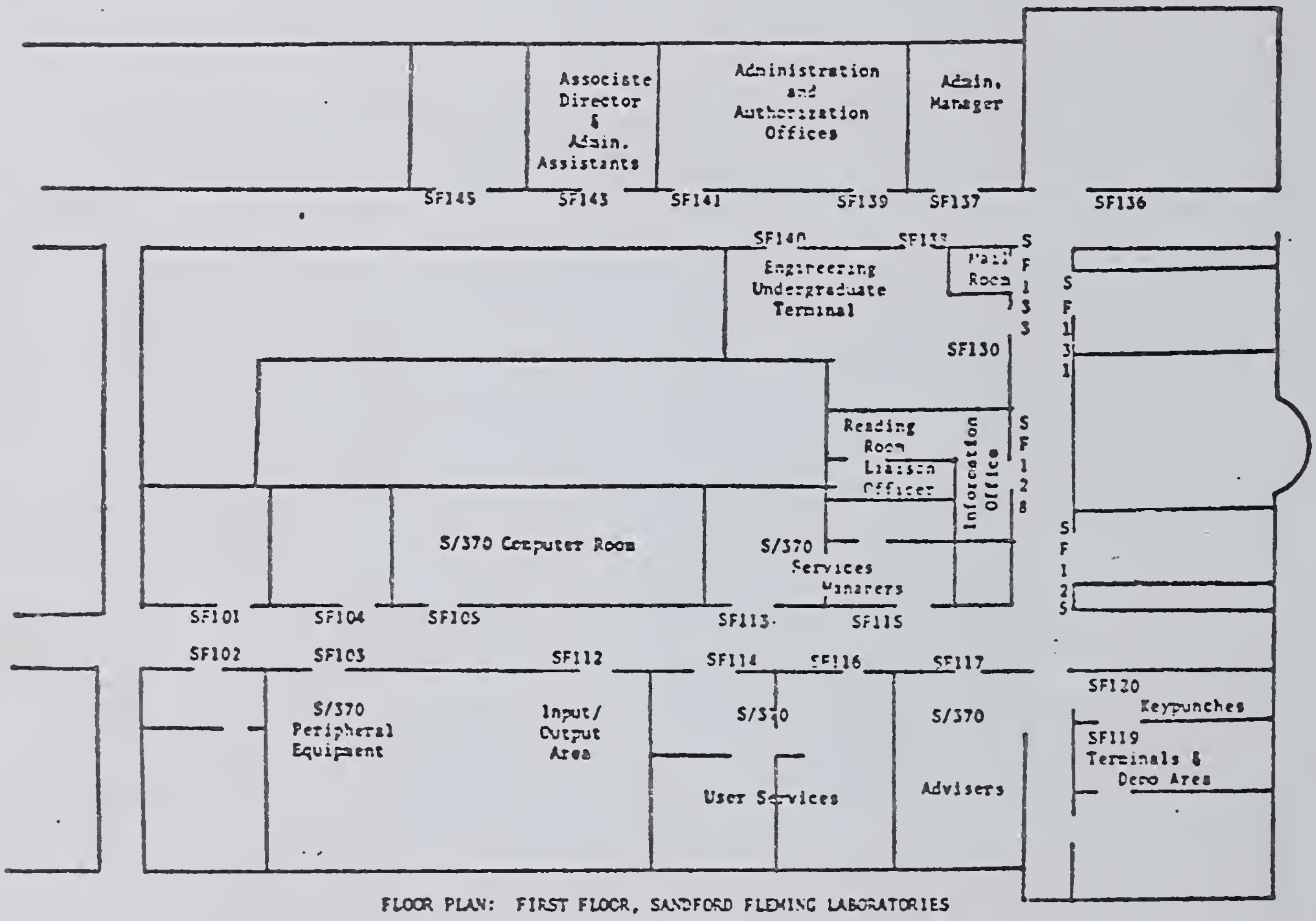


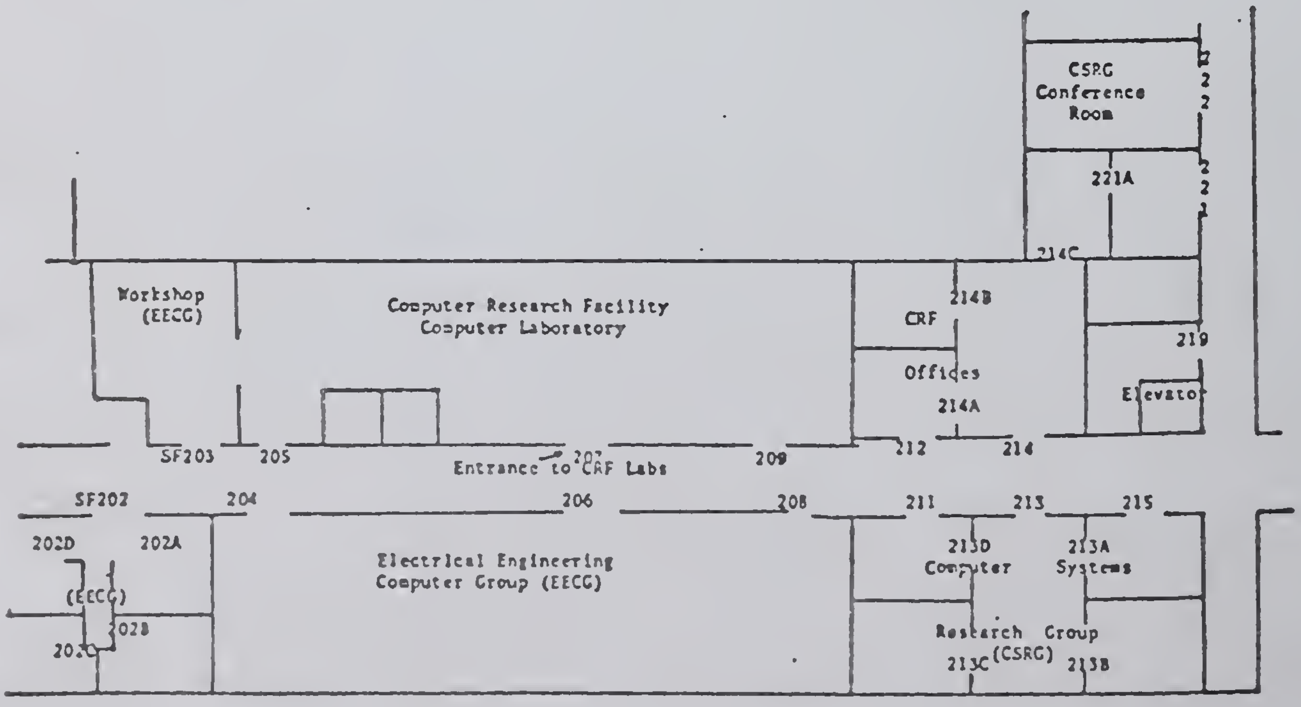


FLOOR PLAN: TWELFTH FLOOR, BURTON TOWER

UNIVERSITY OF TORONTO COMPUTER CENTRE



FLOOR PLAN: FIRST FLOOR, SANDFORD FLEMING LABORATORIES



FLOOR PLAN: SECOND FLOOR, SANDFORD FLEMING LABORATORIES

ACCESS CODE CLERK

Barbara Ablett, S/370 Services Access Code clerk and Yvonne Bowen, Interactive Terminal Systems Access Code clerk have moved to SF 139, UTCC Accounts and Access Codes Office. Their phone numbers remain the same.

Users will now be able to conduct the majority of their accounting transactions in one location.

Stan Yagi

PERSONNEL CHANGES

Leaving the Computer Centre this month are Ellen Jabs, Eli Rejwan and John Morton. Best of luck to you all.

Joining us are John Roth and Geoffrey Groves. John is a programmer with System/370 Services and Geoffrey is a computer operator with Interactive Terminal Systems. Welcome and hope you'll enjoy working with us.

Trudy Holland

RECENT ACQUISITIONS IN THE DEPARTMENT OF COMPUTER SCIENCE LIBRARY

Aho, Alfred V., Hopcroft, J.E.
and Ullman, J.D.
The Design and Analysis of
Computer Algorithms.
Reading, Mass., Addison-Wesley, 1974.

Burch, John G. Jr. and Strater,
F.R., Jr.
Information Systems: Theory and
Practice.
Santa Barbara, Cal., Hamilton Pub.
Co., 1974.

Flores, Ivan
Operating System for Multi-
programming with a Variable
Number of Tasks.
Boston, Allyn and Bacon, 1973.

Gilman, Leonard and Rose, A.J.
APL: An Interactive Approach,
2nd edition.
New York, Wiley, 1974.

Gourlay, A.R. and Watson, G.A.
Computational Methods for Matrix
Eigenproblems.
London, Wiley, 1973.

NSF-CBMS Regional Conference on the
Numerical Solution of Nonlinear
Algebraic Systems with Applications
in Physics, Engineering, and Economics,
University of Pittsburgh, 1972.
Numerical Solution of Systems of
Nonlinear Algebraic Equations:
papers.
G.D. Byrne and C.A. Hall, editors
New York, Academic Press, 1973.

cont'd...

RECENT ACQUISITIONS Cont'd.

Sessions, Vivian S., editor
Directory of Data Bases in the Social and Behavioral Sciences.
New York, Science Associates/International, 1974.

SHARE Working Conference on Data Base Management Systems, Montreal, 1973.
Data Base Management Systems, edited by D.A. Jardine.
Amsterdam, North-Holland, 1974.

Steiglitz, Kenneth
An Introduction to Discrete Systems.
New York, Wiley, 1974.

Wickelgren, Wayne A.
How to Solve Problems: Elements of a Theory of Problems and Problem Solving.
San Francisco, W.H. Freeman, 1974.

UNIVERSITY OF TORONTO COMPUTER CENTRE

University of Toronto

XMAS & NEW YEAR SCHEDULES

	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4
	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
TECHNICAL REF. LIBRARY	SS	X	X	X	X	X	X	X	SS	SS	HS	X	SS	SS	N
INFORMATION OFFICE	SS	X	X	X	X	X	X	X	SS	SS	HS	X	SS	SS	N
ADMINISTRATION OFFICE	X	X	X	X	X	X	X	X	X	SS	HS	X	N	N	N
ACCOUNTING OFFICE	X	X	X	X	X	X	X	X	X	SS	HS	X	N	N	N
DATATALK	X	X	X	X	X	X	X	X	X	N	SS	X	N	N	X
7094*	X	X	X	X	X	X	X	X	X	N	SS	X	N	N	N
S/360 OFFICES	X	X	X	X	X	X	X	X	X	SS	HS	X	N	N	N
S/360 FACILITIES	SS	SS	SS	SS	UO	UO	SS	SS	SS	SS	SS	UO	N	N	N
S/370 OFFICES	X	X	X	X	X	X	X	X	X	SS	HS	X	N	N	N
S/370 FACILITIES	SS	SS	SS	SS	X	X	SS	SS	SS	SS	SS	X	N	N	N
CRF OFFICES	X	X	X	X	X	X	X	X	X	SS	HS	X	N	N	N
CRF FACILITIES*	X	X	X	X	X	X	X	X	X	SS	HS	X	N	N	N

X	closed
UO	unattended operation
SS	single shift 9 am - 5 pm
HS	half shift 9 am - 12 noon
N	normal hours of service

* 7094/CRF FACILITIES WILL BE AVAILABLE TO KEYHOLDERS AS USUAL
There will be no HSJS Advisor on duty from December 9, 1974 to January 5, 1975.
There will be no SFT Advisor (GPJS) on duty from December 21, 1974 through January 6, 1975.

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https://archive.org/details/computernewsnove118jane

VS2 RELEASE 2 IMPLEMENTATION SCHEDULE

The VS2 Release 2 Operating System, barring any unforeseen problems, is scheduled for full production implementation on the S/370-165-II on Monday, December 16, 1974 at 00:00 hours.

Since Saturday, November 23rd, 1974, a test VS2 system has been available every Saturday evening between 6 p.m. and 12 midnight. The test VS2 system will be available until December 14, 1974. Users are invited to help test VS2 on these Saturday evenings. Although a valid S/370 Services Access Code is required, no billing will take place. Staff members will be available to answer questions and to help with any problems which are encountered.

Because we will be operating on the test VS2 system, all services will not initially be available. The status of each upcoming Saturday evening test-time, including service restrictions, will be posted in HOTNEWS.

Rein Mikkor

NEW CHARGING ALGORITHM FOR VS

When the full VS2 Release 2 system is implemented (tentatively scheduled for 00.00 hours, Monday, December 16, 1974), a new charging algorithm will apply to jobs run on the S/370-165-II. Trailer page accounting information will reflect this new algorithm. Basically, the charge for CPU usage and memory usage will be replaced by charges for CPU usage and Tape/Disk I/O usage based on the number of EXCP's (Execute Channel Program) issued by the program. On the average, total charges for any given job under VS2 Release 2 will be the same as they were under OS/MVT. Users who notice large differences in job charges should contact the Terminal Co-ordinator or the S/370 Services Manager at 928-7331.

Stan Yagi

USER FORUM ON VS2 RELEASE 2

As a follow-up to the recent courses on VS2 Release 2, there will be a User Forum Tuesday, December 10, between 2 & 4 p.m. in Galbraith, room 202. The forum will provide an opportunity for users to obtain answers to any questions which might have been stimulated by the courses or for any other questions relating to VS2 Release 2. All are welcome -- coffee and donuts will be provided.

Don Gibson

MANUALS AT BATCH TERMINALS

In the past, when a Remote user required his own copy of a manual, it was necessary for him to make a trip to the Computer Centre Information Office located in the Sandford Fleming Building on the St. George campus.

cont'd.

MANUALS Cont'd.

A service has now been set up making it possible for users to order and receive manuals through the Terminal Co-ordinators. This service is, however, restricted to the following Batch Terminals:

Scarborough
Erindale
Management Studies
Arts & Science

For further information on what manuals are available and how they may be obtained, please contact the Co-ordinators at the above terminals.

Marg Doherty

STATISTICAL ANALYSIS SYSTEM NOW AVAILABLE

SAS (Statistical Analysis System) is a statistical system offering statistical facilities similar to SPSS and Datatext (with several additional non-duplicate facilities). SAS also provides greater flexibility and scope in language statements (resulting in a greater similarity to facilities found in higher level programming languages).

Functional data capabilities include transgeneration of variables, page titling of output, subsetting of data, missing value recognition and handling, and limited error checking of input data.

Programming features include:

- assignment statements to create new variables
- IF-THEN statements to test for the occurrence of various conditions and to determine a suitable course of action
- DROP statements to exclude variables listed from the SAS datasets being built
- DELETE statements to omit particular observations from the dataset being built
- selection of observations to go into the SAS dataset being built through subsetting IF statements
- program statement labels and GO TO and LINK statements to allow for non-sequential execution of SAS program statements
- MACRO statement capabilities

SAS is currently available at UTCC and can be accessed by specifying the following JCL:

```
col. 1
    //  JOB card
    //  EXEC SAS
    //SAS.SYSIN  DD  *
            .
            .    SAS program statements
            .    and data
    /*
```

Draft copies of a document which describes in detail the functions and features of SAS statistical procedures, will be available at the Information Office, SF128.

Len Prepas

ATTENTION SPSS USERS

Version 5 of SPSS with the local UTCC "IGNORE" modification that is available in the UTCC Version 4 is now the default version accessed by all three SPSS catalogued procedures. However, users who still want to use Version 4, need only add Version=V4 to any one of the following cards:

```
// EXEC SPSS,VERSION=V4
// EXEC SPSSTP,VERSION=V4
// EXEC SPSSDS,VERSION=V4
```

where SPSS, SPSSTP and SPSSDS are the names of the three UTCC supplied catalogued procedures.

Some users have recently brought to our attention a documentational discrepancy which appears in the SPSS manual regarding the use of multiple SELECT IF statements. An SPSS newsletter, dated August 1972, deals with this problem.

"SELECT IF control card. Multiple SELECT IF control cards are treated by the system like one SELECT IF statement in which all individual statements are linked together with a logical OR, rather than with an AND. This was stated incorrectly in the SPSS Manual (McGraw-Hill version)."

In the future, copies of the SPSS newsletter will be kept in a file at the various terminals for reference purposes.

Len Prepas

WORLD MODEL IN FORTRAN IV

The World Model, developed by Professors Forrester and Meadows, co-workers at MIT, has been programmed in FORTRAN IV by Professor Schiesser of the Chemical Engineering Department of Lehigh University.

According to the Columbia University Newsletter "The model serves as an illustration of the power of mathematical modelling and simulation, and is invaluable for its economic, sociological, and ecological implications. It is useful as a background for freshmen orientation studies or special student projects".

Documentation defines all variables and cross-references all equations to Professor Forrester's book. Output from the program includes line printer plots which duplicate the plots in the book.

Before making this program available on our system, UTCC would like to get an estimate of how many S/370 users would be making use of this application.

Anyone interested, should contact Marg Doherty in the Technical Reference Centre, SF128, 928-8995.

Marg Doherty

UTTIME: A NEW VERSION

A new version of UTTIME will go into IC.UTILLIB when VS goes into full production. This is the initial version of a VS UTTIME and it is interim in nature. It will be expanded in the future to give the user more complete information. The initial version may be used as shown:

```
CALL UTTIME(DELTIM(1),TIMTOT(1))
```

where DELTIM and TIMTOT are 32 bit integer values and are defined as follows:

- DELTIM measures in microseconds the total amount of CPU time the task has used since the previous call to UTTIME.
- DELTIM is set to zero when UTTIME is first called.
- TIMTOT is a 'running total' of DELTIM and as such contains the total elapsed CPU time in microseconds used by the executing program since UTTIME was first called.

The old OS version of UTTIME has been modified to check whether it is running under OS or VS. If it is running under VS, it will abend the task after issuing an explanation via a Write-to-Operator so that the user knows why a job that may have been working has suddenly failed. Users who have been reading COMPUTERNEWS will have already been warned about the dangers of permanently linkediting an OS version of the program into their load modules.

UTCC is investigating the feasibility of using VS UTTIME to obtain information about the time remaining in a task step and EXCP usage.

Users with questions regarding the use of UTTIME should contact Herb Kugel at 928-7286.

Herb Kugel

ALGOL F

IBM has announced its withdrawal of support for ALGOL F. This means that IBM will not fix any problems with the ALGOL F compiler, library routines or control programs. Since ALGOL F SYSIN and SYSOUT file access will not work directly under VS2 as it does under MVT, ALGOL F will be restricted in its application if used as is.

Users who are using, or planning to use, ALGOL F, should contact Kin Fong at 928-4924 in order to work out alternative methods for SYSIN and SYSOUT file access.

The European IBM users group SEAS has asked IBM to to provide ALGOL F support for VS2 Release 2 and UTCC is presently waiting for a response to this request.

Kin Fong

COBOL UPGRADE

COBOL ANSI3 is scheduled for upgrading to new Release 3.2 on, or about, November 26, 1974. This release fixes a number of known problems and its interface modules for ERROR DECLARATIVES and LABEL HANDLING have been rewritten. These interface modules have been rewritten to ensure the efficacy of the old functions and do not contain any new functions.

Users may wish, or find it necessary, to recompile and relinkedit existing (i.e. pre-Release 3.2) load modules with the new release compiler and library in the following cases:

1. to ensure, in the easiest and safest way, that the 3.2 level library subroutines are being used when existing load modules are to be linkedited with 3.2 level object or load modules.
2. to take advantage of the increased reliability of the compiler.
3. to take advantage of possible memory savings (e.g. A specialized exhaustive LABEL DECLARATIVES test program showed a reduction of 15% in object module size and 9% in load module size).

Any questions or problems should be directed to Kin Fong at 928-4924.

Kin Fong

PL/I UPGRADE

The PL/I CHECKOUT compiler will be upgraded to Release 2.1 on, or about, November 26, 1974. A number of fixes to the PL/I OPTIMIZING compiler will also be applied at the same time. The new release of the PL/I CHECKOUT compiler fixes a number of known problems and provides the following improvements:

1. Generic Selection

   Generic selection based on the number of dimensions (but not the values of bounds or extents) of an argument can now be performed.

2. Reduced Storage Requirement for Translation

   Programs with exceptionally long PL/I statements that contain a significant proportion of blanks, character strings and comments (e.g. large structure declarations) will be compiled in a significantly smaller region.

3. Diagnosis of Insufficient Storage for Interpretation

   When there is insuffecent storage available for interpretation, a diagnostic message will be generated instead of abnormal termination.

cont'd...

PL/I UPGRADE Cont'd.

In addition, with the new release PL/I CHECKOUT under the TSO RUN command or RUN subcommand in EDIT, the printout to the SYSPRINT file will be written to the terminal instead of being lost.

Any problems or questions should be directed to Kin Fong at 928-4924.

Kin Fong

ANNOUNCING MARK IV

UTCC has recently acquired MARK IV, a generalized file management system. MARK IV is not just a programming language. It is a higher level tool with which the user specifies what to do but not necessarily how to do it. One of the primary design objectives of MARK IV is that it be easy to use and to understand for anyone who is not familiar with programming languages. UTCC is currently planning support mechanisms for MARK IV and would welcome any suggestions.

MARK IV has proven itself to be a valuable tool for the business-oriented computer user and is rapidly replacing COBOL and PL/I as the standard tool in many businesses. There are currently about thirty MARK IV users in the Toronto area, including General Motors, Shell, the Ontario Ministry of Education and York University.

Many administrative applications within the university can be handled by MARK IV, resulting in significant savings of the user's time and money. Any users who are currently doing administrative computing (or who would like to) should plan to attend the presentation on MARK IV that will take place in January, 1975. Note: This presentation is intended to act as an introduction to MARK IV and not as an educational seminar.

"PRESENTING MARK IV"
DATE: January 14, 1975
TIME: 2:00-3:00 p.m.
LOCATION: Galbraith Building
Room 202

Users interested in using MARK IV before catalogued procedures, educational programs or USERBOOK documentation are available, should contact Jerry Novak at 928-6387 for the necessary information. MARK IV pamphlets and manuals are available in the UTCC Information Office, SF128 and copies of these manuals can be ordered. Users who wish to obtain further information or who have questions about MARK IV, should contact the MARK IV Co-ordinator, Jerry Novak, 49 St. George St., Room 305, 928-6387.

Jerry Novak

OVERLAY PROGRAMS AND VS

One of the major features of VS is the freedom it allows users in memory usage. While all overlay programs currently executing will work under VS, it is to the user's benefit to re-linkedit these programs so that they will run in a non-overlay mode. This would result in a major savings of computer resources as the MVT Overlay Supervisor would be abolished. The MVT Overlay Supervisor is the OS component that swaps overlay segments in and out of memory. It increases costs for both the user and the system and is not that efficient.

UTCC can help. We have tools to aid in the re-linkediting of programs even if the user's original Linkage Editor control statements have been lost.

Users with questions or problems should contact Herb Kugel at 928-7286.

Herb Kugel

ZOOLOGY REMOTE TERMINAL NOW ACTIVE

The Department of Zoology has recently acquired a Remcom Terminal online to the S/370-165-II. The equipment consists of a Remcom 4780 Terminal with a 600 line per minute printer, a 600 card per minute reader and a CRT-type console.

The installation is located in room 109, Ramsay Wright Building. Users who wish to obtain further information about this terminal should contact John Kornatowski, Terminal Co-ordinator, at 928-6378.

Bill Gillart

TSO TOPICS

Several TSO users have shown interest in learning more about the CHANGE subcommand in TSO EDIT. While a detailed description of this subcommand is beyond the range of COMPUTERNEWS, a few points can be outlined here. A detailed guide to the EDIT processor is currently being prepared and will be incorporated in the new version of USERBOOK which will be available early in 1975.

The CHANGE subcommand has three forms. These are the 'count2' form which is used to truncate a line or lines at a specific column; the 'charstring' form which is used to truncate a line at a character string; and the 'text1/text2/all' form, the common form, which is used to replace text1 with text2. For example,

```
change * 71
```

truncates the line to column 71, allowing continuation characters to be placed in column 72. The form

```
change 120 /smith
```

cont'd...

TSO TOPICS Cont'd.

truncates line 120 at the first occurence of the string 'smith'. The slash ('/') is a delimiter. The final form is

```
change 150 /smith/jones/
```

which would change the letters 'smith' to 'jones' in line 150.

More detailed information on the EDIT command and its subcommands will be available in the new version of USERBOOK. Users with problems or suggestions concerning the TSO EDIT command should contact Ian Darwin at 928-7318.

Ian Darwin

HSJS NEWS & MONTHLY STATISTICS

HSJS users should be aware that there will be no advisor on duty during the period December 9, 1974 through January 1, 1975. Normal HSJS advising hours will resume Thursday, January 2, 1975.

During the month of October, 1974, 233,068 jobs were processed compared with 205,914 for the previous year, an increase of 13.18%.

The following charts summarize the HSJS activity for the month of October. The graph represents the average number of jobs processed during each half hour period of the day.

Mark Tapia

RESOURCE USAGE BY PROCESSOR

			TOTAL PER PROCESSOR			AVERAGE PER USE		
PROCESSOR	#USES	%TOTAL	CPU (MIN)	#CARDS READ	#LINES PRINTED	CPU (MIN)	#CARDS READ	#LINES PRINTED
WATFIV	89813	(39)	889.78	9191085	12079890	0.008	100	132
PL/C	63406	(27)	704.50	4527739	9496054	0.008	68	148
OTHER*	57969	(25)	492.14	2485865	5186717	0.008	40	88
UTILITY	5771	(2)	14.41	525841	717281	0.000	88	124
SPITBOL	5631	(2)	59.12	528294	982588	0.008	92	172
ASMG	4238	(2)	45.21	301852	620837	0.008	68	144
WATBOL	3470	(1)	22.89	331758	400205	0.004	92	112
ALGOLW	1974	(1)	27.96	396470	499525	0.012	200	252
PLUTO	345	(0)	3.32	44991	66594	0.008	128	192
LISP	232	(0)	4.77	16735	32869	0.020	72	140
SIMON	202	(0)	0.79	10534	17426	0.000	52	84
ASSIST	21	(0)	0.03	405	843	0.000	16	40
TOTAL	233072		2264.93	18361569	30100829	0.009	78	129

*SP/k, SPSSQ and SNAP

```
ALL TERMINALS                                                  JOB VOLUME FOR 01/10/74 - 31/10/74
CLASS = W                                                          (AVERAGE OVER 30 DAYS)

                                                    # JOBS WHICH BEGAN EXECUTION AT INDICATED TIME
                                      25   50   75  100  125  150  175  200  225  250  275  300  325  350  375  400  425  450  475  500
                         |#JOBS|TOD|----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
                         |   44|   |66666666
PROCESSOR #USES    %     |   55|   |66666666666
WATFIV    89813 (38)     |   76|  1|666666666666666
PL/C      63406 (27)     |   64|   |666666666666
OTHER*    57969 (24)     |   51|  2|6666666666
UTILITY    5771 ( 2)     |   41|   |66666666
SPITBOL    5631 ( 2)     |   28|  3|66666
ASMG       4238 ( 1)     |   27|   |66666
WATBOL     3470 ( 1)     |   23|  4|6666
ALGOLW     1974 ( 0)     |   22|   |6666
PLUTO       345 ( 0)     |   14|  5|66
LISP        232 ( 0)     |   12|   |66
SIMON       202 ( 0)     |    3|  6|
OTHER         0 ( 0)     |    1|   |
                         |    0|  7|
                         |    1|   |
                         |   70|  8|66666666666666
                         |  158|   |6666666666666666666666666666666
                         |  190|  9|66666666666666666666666666666666666666
                         |  234|   |6666666666666666666666666666666666666666666666
                         |  236| 10|66666666666666666666666666666666666666666666666
                         |  253|   |66666666666666666666666666666666666666666666666666
                         |  294| 11|6666666666666666666666666666666666666666666666666666666666
                         |  303|   |666666666666666666666666666666666666666666666666666666666666
                         |  328| 12|66666666666666666666666666666666666666666666666666666666666666666
                         |  340|   |66666666666666666666666666666666666666666666666666666666666666666666
                         |  327| 13|66666666666666666666666666666666666666666666666666666666666666666
                         |  349|   |666666666666666666666666666666666666666666666666666666666666666666666
                         |  345| 14|666666666666666666666666666666666666666666666666666666666666666666666
                         |  361|   |666666666666666666666666666666666666666666666666666666666666666666666666
                         |  337| 15|6666666666666666666666666666666666666666666666666666666666666666666
                         |  354|   |6666666666666666666666666666666666666666666666666666666666666666666666
                         |  334| 16|666666666666666666666666666666666666666666666666666666666666666666
                         |  336|   |6666666666666666666666666666666666666666666666666666666666666666666
                         |  257| 17|666666666666666666666666666666666666666666666666666
                         |  242|   |666666666666666666666666666666666666666666666666
                         |  214| 18|666666666666666666666666666666666666666666
                         |  210|   |666666666666666666666666666666666666666666
                         |  193| 19|66666666666666666666666666666666666666
                         |  202|   |6666666666666666666666666666666666666666
                         |  208| 20|66666666666666666666666666666666666666666
                         |  209|   |66666666666666666666666666666666666666666
                         |  205| 21|66666666666666666666666666666666666666666
                         |  201|   |6666666666666666666666666666666666666666
SHIFT    #JOBS           |    6| 22|6
0 - 8    14078           |    0|   |
8 - 4   134292           |    0| 23|
4 - 12   84702           |    1|   |
                          7769|   | 8-SERVICE FACTOR(2.0) || 6-SERVICE FACTOR(1.0) || 4-SERVICE FACTOR(0.6|

TOTAL JOBS AT SF 0.6 (UNAVERAGED)      4          *SP/k, SPSSQ and SNAP
TOTAL JOBS AT SF 1.0 (UNAVERAGED) 233068
TOTAL JOBS AT SF 2.0 (UNAVERAGED)      0
TOTAL JOBS AT ALL SF (UNAVERAGED) 233072
```

S/370 RELIABILITY

A sharp decrease in hardware downtime minutes reflects the improved reliability for the month of October. The uptime percentage for October was 98.6 while the average number of IPL's per day was 1.07. The scheduled hours of production for October totalled 497.

Monthly Comparative Figures

Month	% Uptime	Unsched. IPL/s/Day
Sep 73	86.8	3.63
Oct 73	95.6	1.83
Nov 73	98.1	0.93
Dec 73	98.6	0.62
Jan 74	97.0	1.37
Feb 74	98.3	1.25
Mar 74	98.7	1.06
Apr 74	99.3	0.52
May 74	99.2	0.87
Jun 74	96.1	0.75
Jul 74	91.7	1.66
Aug 74	98.3	0.86
Sep 74	94.5	1.83
Oct 74	98.6	1.07

The percentage breakdown of total system downtime for October was: HARDWARE - 117 minutes (28.9%); SOFTWARE - 168 minutes (41.6%); OTHERS - 119 minutes (29.5%). The major events contributing to these downtime totals were as follows:

October 10, 31 - A total of 32 minutes and 3 IPL's were attributed to power problems with the 3704 control unit. Some minor adjustments and a few wires were tightened to rectify the problem.

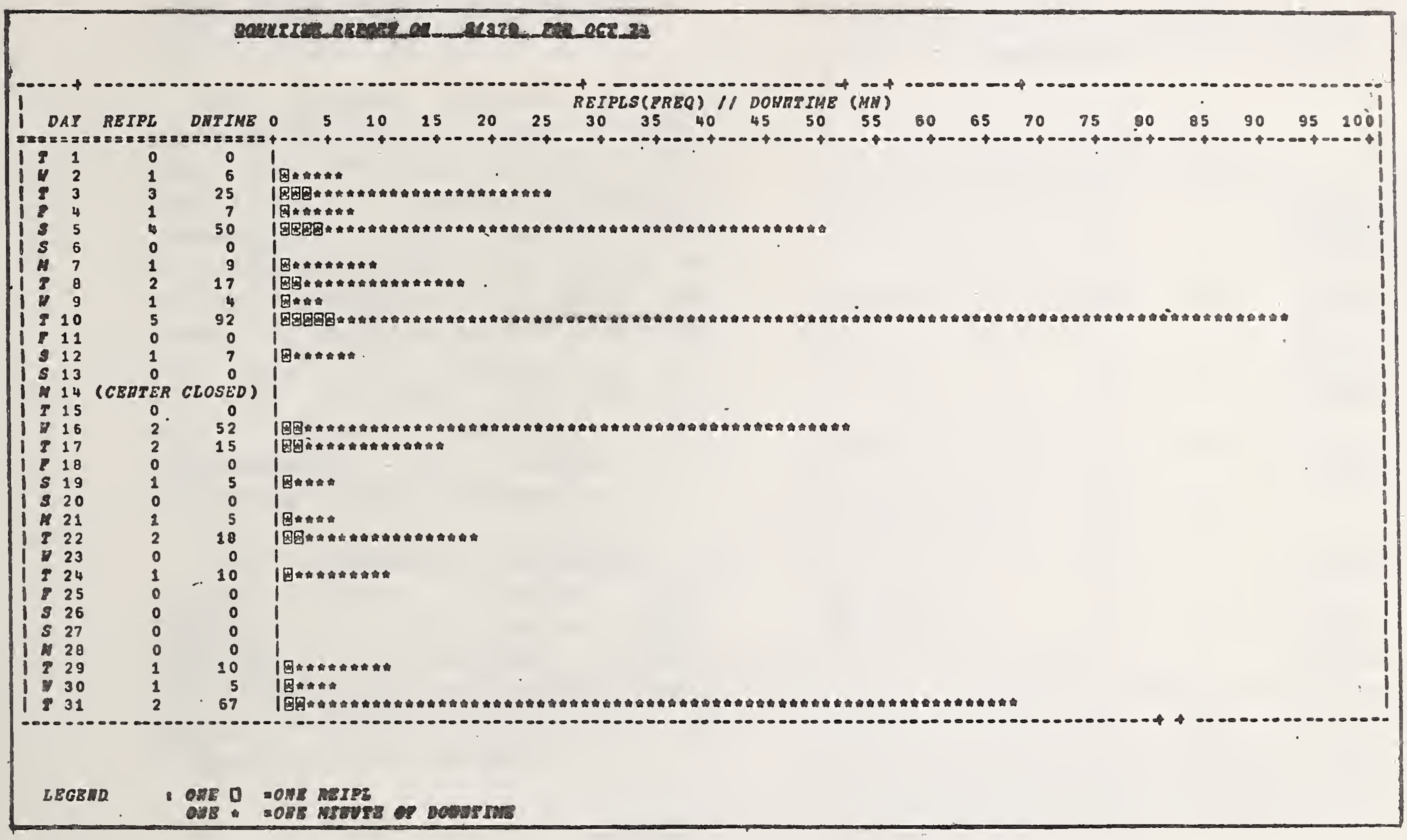
October 5, 10 - A total of 50 minutes and 3 IPL's were attributed to a software problem in the TCAM error handling routines which failed to recover from TCAM I/O errors on various 300 Baud ports. A new version of the 3704 emulator and a superzap were installed to correct this bug.

October 3 - A total of 18 minutes and 2 IPL's were attributed to two Supervisor loops which resulted in console lockouts. The problem was traced to a bug in the Gould error handling routines which has since been fixed by Assurance.

October 16 - A total of 42 minutes and 1 IPL were attributed to a hardware problem with the 7330 ITEL disk drives. A bad pin in one of the addressing cables was repaired by ITEL.

October 31 - A total of 52 minutes and 1 IPL were attributed to a problem with the air conditioning units that cool the Motor Generators. A malfunction in both A/C cooling units caused a thermal check to occur, knocking out power to the MG's and also to the S/370/165-II. Physical Plant was able to rectify the problem.

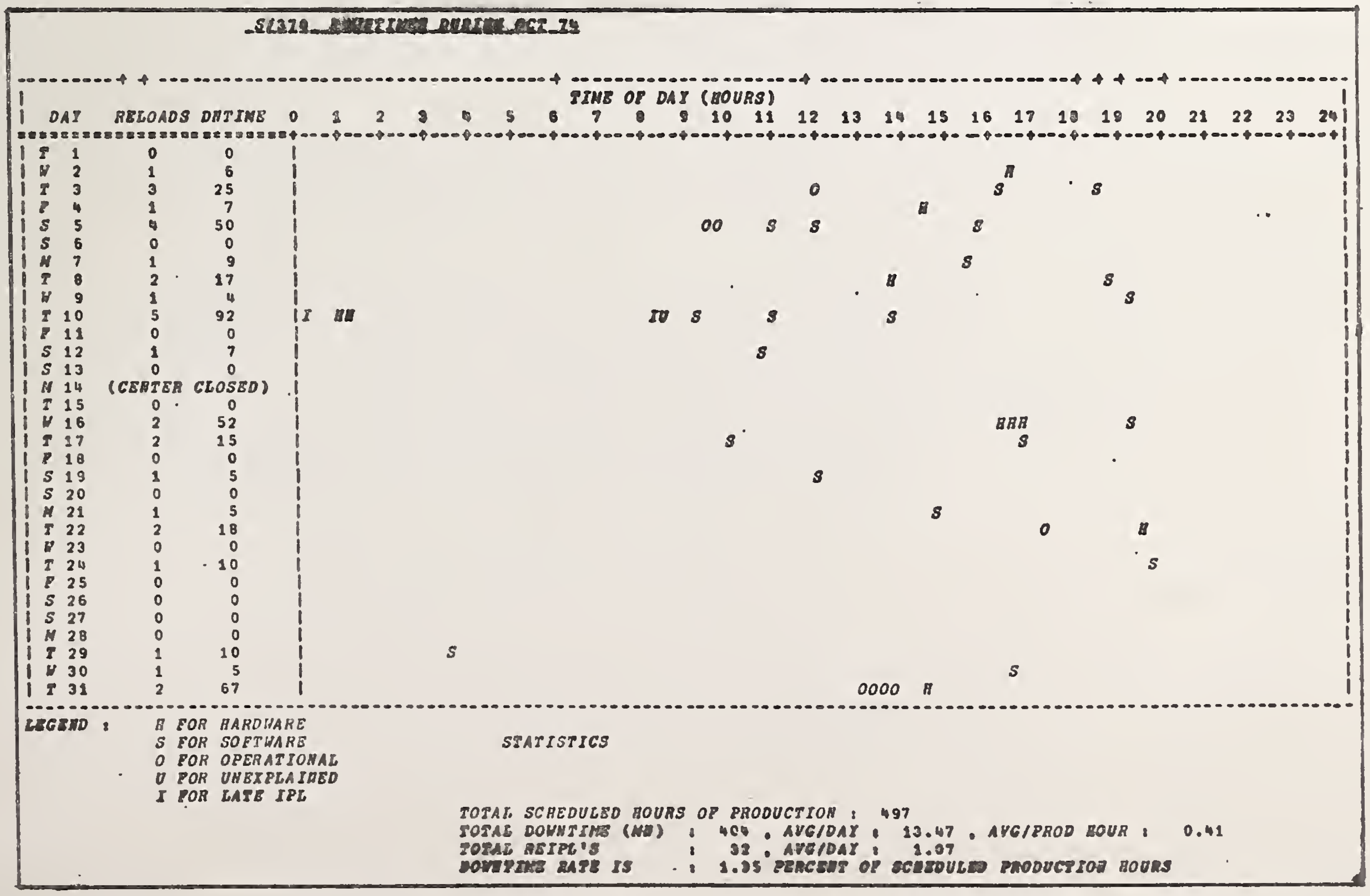
Dave Rauch



```
                    DOWNTIME REPORT OF  S/370  FOR OCT 74

-----+ -------------------------------------------+ ------------------+ --+ ------- --+ --------------------------------
|                                                         REIPLS(FREQ) // DOWNTIME (MN)                                |
| DAY  REIPL   DNTIME 0    5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95  100|
======================+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
| T  1    0         0 |
| W  2    1         6 |☒*****
| T  3    3        25 |☒☒☒**********************
| F  4    1         7 |☒******
| S  5    4        50 |☒☒☒☒**********************************************
| S  6    0         0 |
| M  7    1         9 |☒********
| T  8    2        17 |☒☒***************
| W  9    1         4 |☒***
| T 10    5        92 |☒☒☒☒☒***************************************************************************************
| F 11    0         0 |
| S 12    1         7 |☒******
| S 13    0         0 |
| M 14 (CENTER CLOSED)|
| T 15    0         0 |
| W 16    2        52 |☒☒**************************************************
| T 17    2        15 |☒☒*************
| F 18    0         0 |
| S 19    1         5 |☒****
| S 20    0         0 |
| M 21    1         5 |☒****
| T 22    2        18 |☒☒****************
| W 23    0         0 |
| T 24    1        10 |☒*********
| F 25    0         0 |
| S 26    0         0 |
| S 27    0         0 |
| M 28    0         0 |
| T 29    1        10 |☒*********
| W 30    1         5 |☒****
| T 31    2        67 |☒☒*****************************************************************
---------------------------------------------------------------------------------------------------------+ + ------------


  LEGEND      : ONE ☐  =ONE REIPL
                ONE *  =ONE MINUTE OF DOWNTIME
```



```
                       S/370  DOWNTIMES DURING OCT 74

----------+ +-------------------------------------------+ ---------------------+ --------------------+ + + --+ ------------
|                                                 TIME OF DAY (HOURS)                                                     |
|  DAY   RELOADS DNTIME 0   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24|
========================+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
| T  1       0      0   |
| W  2       1      6   |                                                                 H
| T  3       3     25   |                                               O                S        S
| F  4       1      7   |                                                         H
| S  5       4     50   |                                     OO    S   S               S
| S  6       0      0   |
| M  7       1      9   |                                                             S
| T  8       2     17   |                                                       H                  S
| W  9       1      4   |                                                                             S
| T 10       5     92   |I  HH                           IU  S      S           S
| F 11       0      0   |
| S 12       1      7   |                                          S
| S 13       0      0   |
| M 14  (CENTER CLOSED) |
| T 15       0      0   |
| W 16       2     52   |                                                                HHH          S
| T 17       2     15   |                                       S                           S
| F 18       0      0   |
| S 19       1      5   |                                                S
| S 20       0      0   |
| M 21       1      5   |                                                           S
| T 22       2     18   |                                                                     O        H
| W 23       0      0   |
| T 24       1     10   |                                                                               S
| F 25       0      0   |
| S 26       0      0   |
| S 27       0      0   |
| M 28       0      0   |
| T 29       1     10   |              S
| W 30       1      5   |                                                                  S
| T 31       2     67   |                                                   0000   H
-------------------------------------------------------------------------------------------------------------------------
LEGEND :      H FOR HARDWARE
              S FOR SOFTWARE                   STATISTICS
              O FOR OPERATIONAL
              U FOR UNEXPLAINED
              I FOR LATE IPL

                                      TOTAL SCHEDULED HOURS OF PRODUCTION :  497
                                      TOTAL DOWNTIME (MN)   :  404 , AVG/DAY :  13.47 , AVG/PROD HOUR :   0.41
                                      TOTAL REIPL'S         :   32 , AVG/DAY :   1.07
                                      DOWNTIME RATE IS     . :  1.35 PERCENT OF SCHEDULED PRODUCTION HOURS
```

INTERACTIVE SYSTEMS RELIABILITY

The uptimes achieved for the month of October for each of APL, ATS, and CPS were 98.19%, 97.59% and 97.70% of scheduled operation, respectively. The scheduled hours of operation during the month of October totalled 493, while the number of unscheduled IPL's per day was 0.13. In addition to the scheduled time, APL, ATS and CPS were also available for approximately 94 hours of unattended weekend operation.

The percentage breakdown of total system downtime was: HARDWARE - 614 minutes (86%), SOFTWARE - 36 minutes (5.04%), OTHER - 64 minutes (8.96%). Three unscheduled IPL's were required as a result of the failures.

Kam Jain

DATE	DOWNTIME (mins)			REASON
	APL	ATS	CPS	
Tue. Oct. 1	13	15	16	: *APL Control Terminal Locked (SOFTWARE)
Sat. Oct. 5	331	480	480	LCS Failure (HARDWARE)
Wed. Oct. 9	15	17	18	*Solid System on Test I/O (HARDWARE)
Thu. Oct. 10	116	116	116	Channel Error (HARDWARE)
Tue. Oct. 15	60	62	64	*Power Failure
Tue. Oct. 22	-	4	-	ATS Abend SOF1 (SOFTWARE)
Thu. Oct. 31	-	16	-	I/O Error on INTCNO2 (SOFTWARE)
Total	535	710	678	*IPL Required

System Failures October 1 to October 31, 1974

AWARD-WINNING DATATALK SERVICES

Each year, in conjunction with the Canadian Computer Show and Conference, the Canadian Information Processing Society holds an essay contest. The aim of the competition is to encourage original uses or developments in the Canadian computer field and competition rules specify that papers submitted in the competition must "describe original concepts or developments which make a definite contribution to the current state of the data processing art".

This year, the panel of judges awarded us the first place prize for our paper enitled "University of Toronto DATATALK, Person-through-Person Computing". The potential behind the DATATALK concept of answers as handy as the nearest telephone created a lot of excitement and we were swamped with questions at the award presentation.

We would like, at this time, to express our gratitude to all who have contributed to DATATALK's growing success. Special thanks should go to our Director, Dr. John C. Wilson, the originator of the central DATATALK ideas and the initiator of the project, and to the other UTCC staff who have provided the supporting services. And a very special thank you should go to all DATATALK users who have helped us define and refine the DATATALK Services to meet their needs.

Joyce Walton and Ernst Goetze

DIALOGUE: ZERO SEARCH BY NEWTON'S METHOD

The first of this month's dialogues is unusual in that DATATALK was not able to actually solve this problem completely during a telephone conversation. But, we did solve it later and with a little help from our subscriber it could very well have been another DATATALK telephone application and the dialogue might have gone....

cont'd...

DIALOGUE: ZERO SEARCH Cont'd.

D: Good morning, DATATALK ser...
C: Hi! Daniel C___ calling, password is....
D: Hi. Thank you, Daniel.
C: Yes... Now, I've been working with a peculiar algebraic equation X squared plus Y squared equals sine X plus Y(X*2 + Y*2 = SIN X+Y).
C: The fact is, it defines X equals X of Y, that is, X as a function of Y, provided roughly, $0 < Y < 1$. What I want to know is for what value of Y is X so defined a maximum?
D: Any suggestions, Daniel?
C: No... I guess it's not even easy to graph it, is it?
D: Oh no... That wouldn't be too hard. What I could do is specify Y=0.1, 0.2, 0.3 ... 0.8, 0.9 and solve the equation for X for each fixed Y at those values.
C: O.K. What do you get?
D: Ah, one minute Daniel... I'll set this up at lower precision, say 10^{-5}, just to estimate the X-values...
O.K....
X=0.917, 0.9297, 0.922, 0.896, 0.852, 0.790, 0.704, 0.586, 0.387
D: Also, the curve seems to double over near 0.9 since two X values are returned there.
C: Yes, that's O.K. I know about that. It peaks at about Y=0.2 and X(Y)=0.93?
D: Yes... I would say so... The graph looks like that too.
C: What's X when Y=0.22?
D: 0.9296.
C: What if Y=0.21?
D: X(Y)=0.9297.
C: Aha... So Y=0.21 and X=0.9297 seems pretty good.
D: Yes, but I think we can do better. Let me look at it a little. I'll phone you in an hour or so?
C: O.K. Fine. Thank you.

And DATATALK did phone him back!

X(MAX)=0.92974 64068 994516
when Y = 0.20925 21290 77053.

(To be continued next month).

Ernst Goetze

DIALOGUE: POCKET CALCULATOR, MOVE OVER!

D: Good Evening. U. of T. Datatalk.
B: Hi, Joyce. I've a couple of functions to evaluate.
D: O.K., Joe.... All set, now.
B: I've several values for the independent variable.
D: What'll I call it?
B: THETA. They're 1/8, 1/4, 1/2, 1, 2, 3, 4.
D: O.K. Seven of them?
B: Yes. Now then, PHI is e to the minus THETA.
D: Do you want them read?
B: No, I don't need them. Next, we need BETA. It's two plus five PHI plus eleven PHI squared, all over six PHI cubed.
D: Just a minute. I've got too many brackets.... O.K. Do you want those values?
B: No. I want the base ten log of one over BETA.
D: O.K. How many figures?
B: Five.
D: All negative. -0.56020, -0.64676, -0.83134, -1.25130, -2.28673, -3.48771, -4.75462.
B: Hmm. O.K. Now I want PHI cubed times one minus PHI all divided by one minus PHI to the fourth.
D: PHI to the fourth, or one minus PHI to the fourth?
B: PHI itself to the fourth.
D: O.K.... All right. Five figures?
B: Yes, please.
D: -0.68772, -0.78174, -0.99338, -1.49406, -2.66877, -3.93083, -5.21956.
B: Thank you. That's all.
D: Don't want them plotted or anything?
B: No thanks. That's all for now. Good night.

Joyce Walton

	ROOM	PHONE 928-
DIRECTOR		
John C. Wilson	49 St.Geo	6496
ASSOCIATE DIRECTOR		
Al Heyworth	49 St.Geo	4936
ASSOCIATE DIRECTOR		
Dave McNaughton	SF143	6281
CONTRACT PROGRAMMING		
Bill Greene	SF214C	2694
INFORMATION OFFICE		
General Inquiries	SF128	4990 or 4991
Don Gibson	SF128A	5568
ADMINISTRATION MANAGER		
Anthony Pieterse	SF137	8948
AUTHORIZATION CLERKS		
Yvonne Bowen (Interactive)	SF139	8703
Barbara Ablett (GPJS, TSO)	SF139	5557
Krishna Patnaik (CRF)	SF207	8853
Edith Kovacs (7094)	NP1207	7094
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MANAGER, S/370 OPERATIONS		
Derry Cox	SF113	7092
MANAGER, S/370 SOFTWARE		
Rein Mikkor	SF113	5058
SYSTEM HARDWARE SUPERVISOR		
Eugene Siciunas	SF114	4967
PROGRAM ADVISERS	SF117	8599
INTERACTIVE TERMINAL SYSTEMS		
MANAGER		
Sam Goldfarb	49 St.Geo	3787
CAL COORDINATOR		
Ford Clancy	49 St.Geo	6021
7094 SERVICES		
MANAGER		
Joyce Walton	BT1207	7094
COMPUTER RESEARCH FACILITY		
MANAGER		
Dennis Smith	SF214B	4086

JOB STATUS QUERIES:	
SYSTEM/370	7373
7094	7094
INTERACTIVE TERMINAL SYSTEMS:	
System Status	6234
APL	7200
ATS	7100
CPS	6200
TSO:	
2741 Terminal Malfunctions	7107
2741	7303
TTY	7390

UTCC COMPUTER EQUIPMENT

SYSTEM/370 MODEL 165-II

- located in SF103/105/112
- provides General Purpose Job Stream, High Speed Job Stream and TSO services
- 3072K bytes of memory
- 1 drum
- 12 disk drives (3330)
- 8 disk drives (2314)
- 6 magnetic tape drives (4 9-track and 2 7-track)
- 6 display consoles
- 6 printers
- 5 card readers
- 1 card punch
- 7 remote batch terminals
- 1 paper tape reader
- Calcomp plotters (11" and 30")
- Gould plotter (11")
- OS/MVT with HASP

SYSTEM/360 MODEL 65

- located in McLennan Physical Laboratories
- provides Interactive Systems Service
- 1536K bytes of core
- 16 disk drives (2314)
- 2 9-track magnetic tape drives
- 1 printer
- 1 card reader
- 1 card punch
- 140 typewriter terminals
- OS/MVT with APL, ATS, and CPS

7094 II

- located in Room 1203 Burton Tower
- 32K words of core
- 1 disk
- 8 magnetic tape drives
- input/output via a 1401 computer

COMPUTER RESEARCH FACILITY

- located in SF207
- DEC GT44 System with
  - 1 PDP-11/40 CPU
  - 2 9-track dual density tape drives
  - 1 1000 cpm card reader
  - VT17 graphics display unit
  - 1 lab. peripheral system with A/D & D/A
- DEC GT40 System with
  - 1 PDP-11/10 CPU
  - 1 2314 type disk drive
  - 1 VT12 graphic display unit
  - 9-track/800 BPI tape drive
  - 1 Calcomp microfim plotter
- 2 digitizing tablets
- 1 2701 data adapter with RADDTS

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